

REMARKS

By this amendment, claims 7, 8, 11, and 15-19 have been amended. Claims 1-6, 9, 10, 17, 20, and 22 have been canceled, without prejudice. Claims 7, 8, 11-16, 18, and 19 are pending in the application. Applicants reserve the right to pursue the original claims and other claims in this and other applications.

Independent claims 11 and 18 have been amended as shown above. Support for the term "translating" may be found in the specification at least at page 21, line 4 and page 22, lines 2 and 11. Support for the phrase "determining a primary matching area" may be found at least in original claim 11. Support for the phrase "translating and rotating" may be found in the specification at least at page 27, lines 16-17; page 27, line 28 to page 28, line 1; page 29, line 3; and page 30, lines 4 to 6.

As can be seen regarding amended claims 11 and 18, the claims recite limitations relating to primary pattern matching and secondary pattern matching, which are carried out to produce information used for positioning of a couch. In primary matching, the second set area is translated, and in secondary pattern matching, the second image information in the primary matching area is translated and rotated. Primary and secondary pattern matching can increase positioning accuracy regardless of the skill of individual operators. Further, by performing primary pattern matching by translating the second set area and performing secondary pattern matching by translating and rotating the second image information in the primary matching area, the present invention can reduce the overall processing time.

Claims 7, 8, 11-16, 18, and 19 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,825,845 ("Blair") in view of U.S. Patent No. 6,307,914 ("Kunieda"). This rejection is respectfully traversed.

The Office Action fails to establish a *prima facie* case of obviousness at least because Blair in view of Kunieda, even if properly combinable, do not teach or suggest every element of independent claims 11 and 18. To establish a *prima facie* case of obviousness, the prior art reference (or references when combined) must teach or suggest all the claim limitations. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

Claim 11, as amended, recites, *inter alia*, "executing primary pattern matching between the first image information in said first set area and the second image information in said second set area by translating said second set area within said area of said second image information to determine a primary matching area having said second image information most similar to said first image information in said first set area". Blair does not teach or suggest this limitation. The Office Action equates step 422 of FIG. 6 of Blair with "primary pattern matching". (Office Action, page 8). Applicants respectfully disagree with this characterization. Step 422 in FIG. 6 of Blair represents a step to "SELECT MONUMENTS ON X-RAY IMAGE CORRESPONDING TO THE MONUMENT ON MASTER". This step is not equivalent to pattern matching with the movement of the second set area (executing primary pattern matching between the first image information in said first set area and the second image information in said second set area by translating said second set area within said area of said second image information to determine a primary matching area having said second image information most similar to said first image information in said first set area). Kunieda does not cure the deficiencies of Blair.

Further, although Blair suggests that the monuments may be identified by using a shape recognition software on a computer (column 12, line 23 to column 13, line 7), this simply means that the shape recognition software may be used in place of the

manual operation by a physician upon identifying or selecting the monuments in the state 422 in Figure 6, but does not disclose the limitations of claim 11.

Claim 11, as amended, also recites, *inter alia*, “executing secondary pattern matching comparing the first image information in said first set area and the second image information in said primary matching area by translating and rotating the second image information in said primary matching area relative to the first image information in said first set area, thereby producing information used for positioning of said couch”. Blair does not teach or suggest this limitation. The Office Action equates step 424 of FIG. 6 of Blair with “secondary pattern matching”. (Office Action, page 8). Applicants respectfully disagree with this characterization. Step 424 in FIG. 6 of Blair represents a step to “DETERMINE COORDINATES OF MONUMENTS WITH RESPECT TO CENTER OF BEAM”. This step is not equivalent to pattern matching. Furthermore, this step does not teach translation and rotation of the image information (“executing secondary pattern matching comparing the first image information in said first set area and the second image information in said primary matching area by translating and rotating the second image information in said primary matching area relative to the first image information in said first set area”). Kunieda does not cure the deficiencies of Blair.

Claim 18 contains limitations similar to those of claim 11 and is allowable for similar reasons. Claims 7, 8, 12-16, and 19 depend from claim 11 and are patentable at least for the reasons mentioned above. Applicant respectfully requests that the rejection of claims 7, 8, 11-16, 18, and 19 be withdrawn.

Claims 7, 8, 11-16, 18, and 19 stand provisionally rejected under the doctrine of double patenting as being unpatentable over claims 19-39 of Co-pending Application No. 11/432,363. This rejection is respectfully traversed.

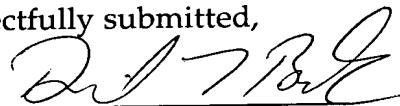
Claim 11 of the present application, as amended, recites, *inter alia*, "executing secondary pattern matching comparing the first image information in said first set area and the second image information in said primary matching area by translating and rotating the second image information in said primary matching area relative to the first image information in said first set area". Application No. 11/432,363 does not claim this limitation.

Claim 18 contains limitations similar to those of claim 11 and is allowable for similar reasons. Claims 7, 8, 12-16, and 19 depend from claim 11 and are patentable at least for the reasons mentioned above. Applicant respectfully requests that the rejection of claims 7, 8, 11-16, 18, and 19 be withdrawn.

In view of the above amendment, applicant believes the pending application is in condition for allowance.

Dated: November 17, 2006

Respectfully submitted,

By 

Mark J. Thronson

Registration No.: 33,082

David Beck

Registration No.: 54,985

DICKSTEIN SHAPIRO LLP

1825 Eye Street, NW

Washington, DC 20006-5403

(202) 420-2200

Attorneys for Applicant